Notice of Allowability	Application No.	Applicant(s)	
	10/713,851	KIM, JONG-SUN	
	Examiner	Art Unit	
	Robert A. Wax	1653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.

2. ☒ The allowed claim(s) is/are *20-33*.

3. ☒ The drawings filed on *14 November 2003* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☒ Certified copies of the priority documents have been received in Application No. *10/223,978*.
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *08242005*.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Joseph Hyosuk Kim on August 24, 2005.

The application has been amended as follows:

Cancel claims 8-19 without prejudice or disclaimer of the subject matter therein.

Add new claims 20-33 as shown below.

20. (New) A nucleic acid encoding a peptide with environmental stress resistance selected from the group consisting of amino acid residues 103-115, amino acid residues 114-126, amino acid residues 119-140 and amino acid residues 130-140 of C-terminal acidic tail of α-synuclein, amino acid residues 85-134 of the C-terminal acidic tail of β-synuclein, amino acid residues 96-127 of the C-terminal acid tail of γ-synuclein and amino acid residues 96-127 of the C-terminal acidic tail of synoretin.

21. (New) The nucleic acid according to claim 20, wherein the synuclein is of human origin.

22. (New) The nucleic acid according to claim 20, wherein the environmental stress is heat, pH or metals.

23. (New) A recombinant vector comprising the nucleotide sequence of claim 20.

24. (New) A host cell transformed or transfected with the recombinant vector of claim 23.

25. (New) A method for preparing a peptide with environmental stress resistance comprising culturing the host cell according to claim 24 to produce the peptide and isolating the peptide.

26. (New) A nucleic acid encoding a fusion protein comprising a peptide with environmental stress resistance selected from the group consisting of amino acid residues 103-115, amino acid residues 114-126, amino acid residues 119-140 and amino acid residues 130-140 of C-terminal acidic tail of α-synuclein, amino acid residues 85-134 of the C-terminal acidic tail of β-synuclein, amino acid residues 96-127 of the C-terminal acid tail of γ-synuclein and amino acid residues 96-127 of the C-terminal acidic tail of synoretin and a fusion partner protein.

27. (New) The nucleic acid according to claim 26, wherein the peptide binds to a position of an amino acid residue that does not affect the intrinsic properties of the fusion partner protein.

28. (New) The nucleic acid according to claim 26, wherein the position of the amino acid residue is the N-terminus and/or the C-terminus of the fusion partner protein.

29. (New) The nucleic acid according to claim 26, wherein the fusion partner protein is a protein which is unstable to environmental stress.

30. (New) The nucleic acid according to claim 26, wherein the protein which is unstable to environmental stress is glutathione-S-transferase or dihydrofolate reductase.

31. (New) A recombinant vector comprising the nucleotide sequence of claim 26.

32. (New) An isolated host cell transformed or transfected with the recombinant vector of claim 31.

33. (New) A method for preparing fusion protein showing environmental stress resistance while conserving intrinsic properties of the protein unstable to environmental stress, which comprises culturing the host cell according to claim 32 to produce the fusion protein and isolating the fusion protein.

2. The following is an examiner's statement of reasons for allowance: The peptides encoded by the claimed DNA are not taught by the prior art of record and were therefore found patentable in the parent case. The prior art of record similarly does not teach the DNA encoding the peptides and therefore the claimed DNA is allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Wax whose telephone number is (571) 272-

0623. The examiner can normally be reached on Monday through Friday, between 9:00 AM and 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon P. Weber can be reached on (571) 272-0925. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert A. Wax
Primary Examiner
Art Unit 1653

RAW